

MR1035-1507

Serial Number: 10/092,340

Reply to Office Action dated 2 November 2004

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the Application.

Listing of Claims:

Claim 1 (Currently amended): A method of ~~enhancing~~ error resilient resiliency in an encoded video transmission, the method comprising the steps of:

receiving at an encoder a first frame and a next consecutive frame of a video data sequence;

determining if ~~the receiving an indication that~~ a first frame is indicative of corresponds to a scene change in the video data sequence;

intracoding the first frame responsive at least partly in response to a positive determination receiving the indication that the first frame corresponds to is indicative of a scene change;

automatically intracoding the next consecutive frame responsive to the positive determination that the first frame is indicative of a scene change; and

transmitting over a transmission medium the intracoded first frame and the intracoded next consecutive frame; and,

decoding at a decoder any of the first frame and the next consecutive frame that traverses the transmission medium without unrecoverable degradation to reconstruct the video data sequence.

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Claim 2 (Currently amended): The method as ~~defined~~ recited in claim 1, ~~wherein~~
whereby the transmission of the intracoded first frame and the intracoded next
consecutive frame in the transmitting step is MPEG-4 compliant.

Claim 3 (Currently amended): The method as ~~defined~~ recited in claim 1, wherein
the first frame is ~~designated as an~~ MPEG compliant I-frame.

Claim 4 (Currently amended): The method as ~~defined~~ recited in claim 1, wherein
the next consecutive frame is ~~designated as an~~ MPEG compliant I-frame.

Claim 5 (Currently amended): The method as ~~defined~~ recited in claim 1, wherein
the next consecutive frame is not a scene change frame.

Claim 6 (Currently amended): The method as ~~defined~~ recited in claim 1, further
including the steps of:

receiving at the encoder wherein a frame in the video data sequence
immediately subsequent to the next consecutive frame ~~is interceded;~~
intercoding the frame immediately subsequent to the next consecutive
frame;

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transmitting the intercoded frame immediately subsequent to the next
consecutive frame in the transmitting step; and
decoding the intercoded frame immediately subsequent to the next
consecutive frame in the decoding step.

Claim 7 (Currently amended): The method as ~~defined~~ recited in claim 1, wherein the scene change determination step includes the step of reading from a file the indication that the first frame corresponds to a scene change ~~is read from a file.~~

Claim 8 (Currently amended): A video coding apparatus, comprising:

a processor;

a first instruction sequence stored in a processor readable memory, the first instruction sequence operable to cause the processor ~~configured~~ to receive an indication that a first frame in a video data sequence is to be intracoded;

a second instruction sequence stored in the processor readable memory, the second instruction sequence operable to cause the processor ~~configured~~ to intracode the first frame ~~at least partly in response~~ responsive to the indication;
and

a third instruction sequence stored in the processor readable memory, the third instruction sequence operable to cause the processor ~~configured~~ to ~~automatically~~ intracode the frame in the video data sequence immediately after the

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first frame ~~as a result of responsive to~~ the indication that the first frame is to be intracoded, the frame immediately after the first frame being intracoded such that any of the first frame and the frame immediately after the first frame may be used to reconstruct the video data sequence.

Claim 9 (Currently amended): The video coding apparatus as ~~defined~~ recited in claim 8, wherein the video coding apparatus is an integrated circuit.

Claim 10 (Currently amended): The video coding apparatus as ~~defined~~ recited in claim 8, wherein the video coding apparatus is a cellular phone.

Claim 11 (Currently amended): The video coding apparatus as ~~defined~~ recited in claim 8, wherein the video coding apparatus is a desktop computer.

Claim 12 (Currently amended): The video coding apparatus as ~~defined~~ recited in claim 8, wherein the video coding apparatus is a personal digital assistant.

Claim 13 (Currently amended): The video coding apparatus as ~~defined~~ recited in claim 8, further including a fourth instruction sequence stored in a processor readable memory, the fourth instruction sequence operable to cause the processor to determine if ~~wherein~~ the first frame is a scene change frame and further

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operable to cause the processor to provide the indication that the first frame is to be intracoded upon a positive determination that the first frame is a scene change frame.

Claim 14 (Currently amended): The video coding apparatus as ~~defined~~ recited in claim 8, further comprising a file ~~used to store~~ having stored therein the indication that the first frame is to be intracoded.

Claim 15 (Currently amended): A method of encoding video frames, the method comprising:

receiving a video data sequence;

receiving a first instruction to intracode a first frame in the video data sequence;

intracoding the first frame in the video data sequence ~~response~~ responsive to the first instruction; and

intracoding a second frame in the video data sequence as a result of responsive to the first instruction to intracode the first frame, the second frame being immediately subsequent to the first frame, the second frame being intracoded such that any of the first frame and the second frame may be used to reconstruct the video data sequence.

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Claim 16 (Currently amended): The method as ~~defined~~ recited in claim 15, further comprising transmitting the intracoded first frame and the intracoded ~~next~~ second frame.

Claim 17 (Currently amended): The method as ~~defined~~ recited in claim 15, wherein the first instruction is executed only if the first frame is a scene change frame.

Claim 18 (Currently amended): The method as ~~defined~~ recited in claim 15, wherein whereby the second frame is intracoded in the second frame intracoding step has where data of the second frame is of an activity level that would cause it indicate the second frame to be interceded intercoded in the absence of the first instruction.

Claim 19 (Currently amended): The method as ~~defined~~ recited in claim 15, further comprising ~~interceding~~ intercoding a third frame ~~based at least in part on its in~~ accordance with relative visual motion of elements displayed thereby, the third frame being immediately subsequent to the second frame.

Claim 20 (Currently amended): An encoding apparatus, comprising:

means for receiving a video data sequence;

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a means for receiving a first ~~indication~~ instruction to intracode a first frame in the video data sequence;

a means for intracoding the first frame ~~in response~~ responsive to the first instruction; and

a means for intracoding a second frame in the video data sequence responsive to as a result of the first instruction to intracode the first frame, the second frame being immediately subsequent to the first frame, the second frame being intracoded such that any of the first frame and the second frame may be used to reconstruct the video data sequence.

Claim 21 (Currently amended): The encoding apparatus as ~~defined~~ recited in claim 20, further comprising a means for ~~providing~~ retrieving the first intracoded frame and the second intracoded frame from the video data sequence.

Claim 22 (Currently amended): The encoding apparatus as ~~defined~~ recited in claim 20, wherein the encoding apparatus is included in an integrated circuit.